

1 I claim:

2 1. A wave reducing and eliminating ship hull comprising:

3 4 a generally triangular hull having a pointed narrow bow portion and
5 5 a stern portion wider than said bow portion;

6 7 said hull including generally rectilinear diverging sides extending
8 8 substantially from said bow to said stern; and

9 10 said hull having a draft adjacent said bow deeper than the draft
11 11 adjacent said stern.

12 13 2. The ship hull of claim 1 wherein said bow portion of said
14 14 hull is generally free of depending structures.

15 16 3. A transonic hull having a submerged portion with a bow,

17 17 a stern, a waterplane which in static conditions and in motion has
18 18 an approximately triangular shape with an apex adjacent said bow
19 19 and a base adjacent said stern, said submerged portion in said
20 20 static condition having a deep draft adjacent said bow and a draft
21 21 adjacent said stern no greater than approximately 4% the width of
22 22 said base, with said draft at said stern decreasing by virtue of
23 23 the motion of said hull on the water towards zero relative to the
24 24 water flowing adjacent and downstream from said stern.

25 26 4. A transonic hull having a bow, a stern, a length and
27 27 power means to move said TH in the water at supercritical and
28 28 subcritical speed regimes, said hull when in motion in displacement

1 mode having

- 2 a) A submerged portion with a generally triangular waterplane
- 3 with apex adjacent said bow and a base adjacent said stern.
- 4 b) A profile with a deeper draft adjacent said bow and no
- 5 bulb, and substantially zero draft adjacent said stern
- 6 relative to water flowing smoothly downstream below said
- 7 stern.
- 8 c) Said hull further characterized in having, when floating
- 9 static in water, a draft adjacent said stern no greater than
- 10 substantially 4% of the width of said base.

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12 5. The transonic hull of Claim **4** in which said draft

13 adjacent said stern is substantially eliminated in relation to

14 water level adjacent and aft of said stern when propelled by said

15 power means at speed-to-length greater than 1.25.

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17 6. A transonic hull having a weight, a submerged portion, a

18 bow, a stern, a generally triangular waterplane with a longitudinal

19 length and an apex adjacent said bow, and a center of area of said

20 waterplane, with the position of the center of gravity of said

21 weight being located at a longitudinal distance forward of said

22 center of area at least as large as approximately 1.5% of said

23 longitudinal length, whereby hydrodynamic drag is minimized.

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25 7. The transonic hull of Claim **6**, with said longitudinal

26 distance being no greater than approximately 10% of said

27 longitudinal length.

1 8. A transonic hull having a weight, a submerged portion, a
2 bow, a stern, a generally triangular waterplane, with a
3 longitudinal length, an apex adjacent said bow, and a base adjacent
4 said stern, and a center of area of said waterplane, with the
5 position of the center of gravity of said weight being located at
6 a longitudinal distance forward of said center of area at least as
7 large as approximately 5% of the length of said base, whereby
8 hydrodynamic drag is minimized.

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10 9. The transonic hull of Claim 8, with said longitudinal
11 distance being no greater than approximately 10% of said
12 longitudinal length.

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14 10. A transonic hull having a bow, a midbody, a stern
15 propulsive means having water impeller means capable of imparting
16 sustained motion at a sustained speed-to-length ratio at least as
17 large as substantially 1.25, said hull further characterized in
18 having a submerged portion with a waterplane of generally
19 triangular shape with apex adjacent said bow, a base adjacent said
20 stern, and a profile view with a deep draft away from said stern
21 and adjacent said midbody, and substantially zero draft at said
22 stern relative to water flow downstream from below said stern.

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24 11. A transonic hull having a bow, a stern, an undersurface,
25 and an approximately triangular waterplane at water level with an
26 apex angle adjacent said bow; said transonic hull being further
27 characterized in that the included exit angle in side view between
28 the rearward undersurface portion adjacent said stern and a line

1 parallel to water level intersecting the lower corner of said stern
2 being no greater than approximately said apex angle.

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4 12. The structure of Claim 11 in that said exit angle is
5 approximately 60% of said apex angle.

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